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Financial Safety Nets and Incentive Structures in Latin America

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Three principles that should govern the safety net for a country's financial system, altering bank behavior and deepening financial intermediation by shifting some risk to the government.

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Summary findings

Well-designed bank safety nets should alter bank behavior and deepen financial intermediation by shifting some risk to the government. It is often said that the best safety net for a financial system is one that makes market participants behave as if the safety net did not exist.

Brock examines issues associated with safety nets for financial systems in small open economies such as those in Latin America.

He stresses three principles that should guide the design and operations of a financial system safety net:

• *Safety nets should strengthen rather than supplant private capital, monitoring, and closure mechanisms.* The presence of asymmetric information gives borrowers, bankers, and depositors incentives to voluntarily impose capital requirements, monitoring arrangements, and contractual provisions for the closure or recapitalization of firms and banks. Government regulations or safety net provisions should be designed to work in harmony with the incentives private agents already face.

• *Safety nets must take into account both aggregate risk and idiosyncratic risk.* In particular, good safety nets must be designed to take into account large but infrequent macroeconomic shocks as well as to encourage prudential bank behavior during normal times.

• *Safety net design should be grounded in the historical and institutional framework of any given country.* Safety nets evolve over time and must allow for problems that have existed for a long time — but must also take into account current political pressures and today's generally higher expectations about the government's ability to insure the financial system against aggregate shocks.

This paper — a product of Finance, Development Research Group — is part of a larger effort in the group to study the role of incentives in finance. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Kari Labrie, room MC3-456, telephone 202-473-8256, fax 202-522-1155, Internet address klabrie@worldbank.org. The paper may also be downloaded at http://www.worldbank.org/html/prdhome/Interest/interestweb.htm. The author may be contacted at plbrock@u.washington.edu. October 1998. (35 pages)

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1. Introduction

Financial safety nets are, in general terms, a set of institutions, laws, and procedures that strengthen the ability of the financial system to withstand bank runs and other systemic disturbances. Safety nets evolve over time so that in any one country the existing safety net has been shaped by that country's history of financial crises and regulatory pressures. Some innovations in financial safety nets, however, spread contemporaneously between countries. A recent example is the widespread adoption of deposit insurance by developing countries.

Safety nets shift risk to the government at the same time that they promote financial deepening. In the same way that banks can bear the residual risk from many diversified projects better than any single agent, the government by insuring a diversified set of banks can bear the residual risk of bank failure better than any set of depositors at a single bank. Although it is frequently said that the best safety net is one that results in market participants behaving as if the safety net did not exist, well-designed bank safety nets *should* alter bank behavior and deepen financial intermediation by shifting some risk to the government.

A good institutional safety net will balance the benefits of financial deepening to society with the costs of risk-shifting to the government. The design of a good safety net must balance its components--including lender-of-last-resort facilities, deposit insurance, capital requirements, supervision, and closure and recapitalization rules--in such a way as to carefully control the amount of risk borne by the government. To the extent that a formal safety net fails to anticipate political and economic pressures during a crisis, an ex-post safety net will emerge in which risk shifting is driven by governmental discretion rather than by rules.

Many books have been written in the last decade on financial safety nets, including Benston and colleagues (1986), Brock (1992), Dewatripont and Tirole (1993), Hausman and Rojas-Suárez (1996), Lindgren, Garcia, and Saal (1996), and Rojas-Suárez (1997). Some textbooks, such as Garber and Weisbrod (1992), have also included expanded sections on safety nets. Papers by Calomiris (1996), Mishkin (1996), and Garber (1997) are particularly valuable

recent contributions to the growing safety net literature for developing countries. The literature on safety nets has become technically more precise by drawing on advances in contract theory and optimal governance structure. Dewatripont and Tirole (1993) is an example of the good application of newer theory to the design of financial safety nets. In this paper I begin with a treatment of some aspects of the theory, but leave more extensive coverage to the papers cited above. My approach draws more on institutional economics, and more precisely on the approach taken by Kindleberger (1978), in the sense that I believe the design of good financial safety nets for Latin America depends upon an understanding of the way that formal ex-ante safety nets have broken down during times of crisis over the past one hundred years. Such an understanding requires historical examples, and leads to the conclusion that applications of contract theory and optimal governance structure have not yet solved the technical problem of designing an optimal safety net for economies that are subject to large aggregate shocks.

In this paper I explore these issues surrounding safety nets for financial systems in small open economies like those in Latin America. The starting point in Section 2 is the idea that asymmetric information will generally restrict the scope for lending to potential borrowers. In the presence of asymmetric information the creation of loan covenants will generally benefit both borrowers and lenders by reducing the cost of lending. These loan covenants usually involve capital ratios, provisions for monitoring, and mechanisms for shifting control of assets to lenders when borrowers cannot repay.

Section 3 shows that government regulation of financial intermediaries can frequently lower the cost of lending. The creation of better bankruptcy laws, the granting of special legal powers to bank boards, and the requirement that liquid bank liabilities be backed up by liquid assets are all ways in which prudential state regulation can expand the scope for intermediation. Although prudential regulation may sometimes not imply the creation of an explicit safety net, the section shows that state regulation of the financial system frequently results in state intervention during times of crisis, even when there is no formal role for the government. The diversion of government funds to borrowers or the devaluation of the exchange rate are common

ways to provide an *ex-post* safety net to banks and borrowers (but not generally to depositors).

Section 4 discusses the creation of central banks in Latin America in the 1920s as an innovation to promote financial deepening. In addition to the basic goals of prudential state regulation, a central bank has the goal of expanding intermediation by more formally monitoring bank operations and by acting as lender of last resort to assure the liquidity of the banking system. The section examines in particular why orthodox institutions adhering to the gold standard were forced to extend an *ad hoc* safety net to rescue banks and bank borrowers at the start of the Great Depression. The section then examines the operation of the safety net under financial repression and during financial liberalizations. Ex-ante safety nets have almost never been in place during financial liberalizations, but ex-post safety nets always emerge during financial crises that frequently follow the liberalizations. These ex-post safety nets are often complex and take many years to unravel once they have been put into place.

Depositors are typically left out of the informal safety net. During crises depositors may suffer explicit losses ("haircuts"). More likely is the imposition of capital controls and exchange rate devaluation that lowers the foreign exchange value of deposits. Section 5 shows that the extension of the safety net to depositors is a relatively new and untested development. Like other state interventions, deposit insurance has the goal of expanding the scope of intermediation by lowering the cost of funds to banks. If the state has a comparative advantage in monitoring banks, deposit insurance has the potential to improve welfare and expand output. As with other innovations that expand the scope for intermediation, the safety net created by deposit insurance may seriously misallocate an economy's resources. The section then poses the issues raised by deposit insurance within the framework of catastrophe insurance. For most Latin American countries the long-term challenge to the credibility of deposit insurance will be the ability of their governments to secure a large enough access to world capital markets to protect depositors following "catastrophic" macroeconomic shocks.

Section 6 concludes with a discussion of the design of safety nets that takes into account the principles developed in the paper.

2. Capital, Monitoring, and Closure

The discussion of safety nets can usefully be centered around the concepts of asymmetric information, adverse selection and moral hazard. The problem for a bank and its borrowers is the presence of asymmetric information regarding the *ex ante* profitability of projects. If the bank cannot distinguish between projects it must charge a "lemons" premium across all projects that takes into account the probability of mistakenly funding a bad project.[1] As a result, borrowers with good projects have an incentive to look elsewhere for funding, leaving the bank with a worse pool of borrowers from which to choose. If this *adverse selection* problem is severe enough, no lending takes place.[2] Even if the adverse selection problem is not severe, asymmetric information creates a *moral hazard* that gives borrowers an incentive to add risk or take other actions that increase the probability of default after the loan has been made. These same forces are at work between depositors and banks, creating problems of adverse selection ("bad" banks are more apt to enter a market) and moral hazard (banks have an incentive to add risk or take other actions that harm depositors).

An institutional safety net shifts responsibility to the government for managing some of the incentive problems arising from asymmetric information. Deposit insurance, for example, relieves depositors of the need to worry about banks' incentives to add risk in the presence of asymmetric information by giving that responsibility to the deposit insurance agency. The effectiveness of the institutional safety net depends on its ability to promote adequate capital adequacy levels in banks and firms, to create effective monitoring and supervision mechanisms, and to impose appropriate punishments (such as bank closure or removal of bank management) when the resources of the safety net are called upon.

Although safety net issues especially involve deposit contracts, the analysis of loan contracts provides a simpler starting point. When banks lend money to firms, they write loan

[1]See Akerlof (1970)
[2]See Stiglitz and Weiss (1981)